Universal Design for Learning

in the Classroom

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Universal Design for Learning

An introduction

UDL is the practice of embedding flexible strategies into the curriculum during the planning process so that ALL students can access a variety of learning solutions. (CAST.org)

UDL is built on the premise that there is no one kind of learning

- Learning differs across tasks
- Learning differs across development
- Learning differs across individuals

UDL strategies for instruction are frontloaded rather than retrofitted.

- More efficient in the long run.

- Benefits more students

- More acceptable to students

Universal design for learning (UDL) is a framework for removing barriers by anticipating the needs of all students

UDL History

The American Disabilities Act prompted rethinking about architectural design for disabled individuals. (Curb cuts, automatic doors)

The concept of universal design has also been applied to web page designs, which enables users who are blind or deaf to access the Internet (Goodrich, 2004).

More recently, universal design has been applied to education. UDL has entered the educational world at this point in time because the technology is more available to make it possible.

Universal Design and Education

- In the mid 1990's, the concept of universal design was applied to education (www.cast.org)

- UDL is a national initiative at this time in the educational world because the technology is available to make it happen.

Educational reforms that have set the stage for UDL

- Classroom demographic changes
- Greater understanding of brain development and learning (multiple pathways for learning)
- Understanding that one size does not fit all
- Educational legislation: Emphasis on progress for ALL children:
  - **NCLB**
  - **AYP**
  - **Full inclusion**
  - **IDEA -IA**

UDL …harnesses the power and flexibility of modern technology.

Technology provides the flexibility needed to adjust to learner differences

Universal Design for Learning

Examples of UDL strategies
using technology tools

Flexible strategies for all students are a hallmark of UDL

Using a curriculum that is rooted in 3 UDL principles...

Teachers provide:

1. Flexible ways of <u>presenting</u> lesson content

2. Flexible options for student <u>engagement</u>

3. Flexible methods of <u>expression</u>, and <u>assessment</u>

Students have:

1. Options for how they receive content

2. Choices which will engage student interest

3. Choices for how they demonstrate their learning

Multiple means of engagement

Provide learning choices

- Audio/ visual/ hands on
- Multimedia projects
- Webquests
- Project-based inquiry
- Email projects
- Cooperative learning projects

Multiple Means of Presentation

1. Visual presentations, e.g., United Streaming
2. Enlarged print
3. Audio text support, e.g., Kurzweil, Solo
4. Multimedia presentations, e.g., Windows movie maker, PowerPoint with Power Talk
5. Internet links to background information
6. Access to definitions, illustrations, sound files or pictures

Multiple means of expression

- Graphic outlining tools
- Keyboarding with spelling supports
- Podcasting
- Multimedia tools: PowerPoint, Windows moviemaker
- Product models
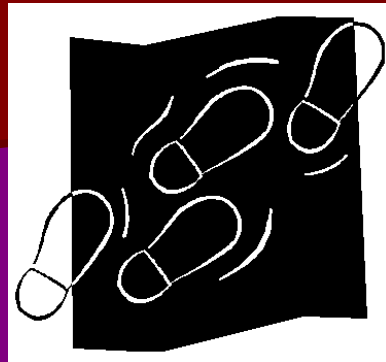- Drawings
- Video or digital photo reports
- Collages
- Graphs
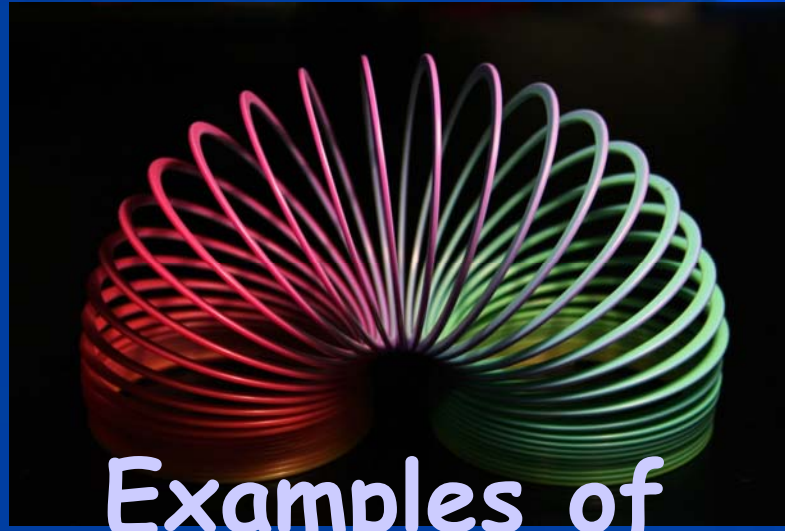
Examples of Flexible Materials

Click to view examples for Elementary or Secondary classroom materialss

Implementing UDL in your school and classroom

First Steps

How do you incorporate the principles of UDL into lesson planning?

Relook at curriculum…

➢ Start with a manageable curriculum unit
➢ Be clear on the goals of the unit
➢ Be clear on what students need to do to show mastery
➢ Determine what the instructional barriers are for a range of students
➢ Determine what tools would help this
➢ Identify more flexible methods, materials and assessments

The UDL Solutions Table
## Reexamining instructional strategies

Customize the UDL Solutions Table to match your instructional activities and the range of learners in your classroom

UDL Solutions Planning Table

| Instructional Activities	Challenges for some students	UDL solutions Methods and materials that offer multiple means of:		
		Engagement	Presentation:	Expression (Including Assessment)
Printed reading materials	Student cannot see small text. Student cannot decode at grade level. Student has difficulty comprehending vocabulary.			
Whole class presentations	Student is distractible and misses information. Student has difficulty processing verbal information. Student has difficulty comprehending material content.			
Writing assignment	Student cannot handwrite legibly. Student cannot outline and organize ideas. Student has difficulty with written language. Student struggles with spelling.			

UDL Solutions Planning Table

Instructional Activities	Challenges for some students	UDL solutions Methods and materials that offer multiple means of:		
		Engagement:	Presentation:	Expression *including Assessment*
Assessments	Student cannot read questions. Student cannot retrieve key content vocabulary with ease. Student needs test taking preparation.			
Organizational skills/work habits	Student had difficulty understanding or sequencing tasks. Student has difficulty staying on task. Student has difficulty completing homework. Student is reluctant to ask for help.			
Research	Student has difficulty with organization. Student may not be able to abstract important content.			
Oral report	Student has speech difficulties. Student has difficulty presenting orally in front of peers.			
Drawing	Student cannot draw to represent objects or math/science concepts			
Group project	Student has difficulty interacting with peers.			
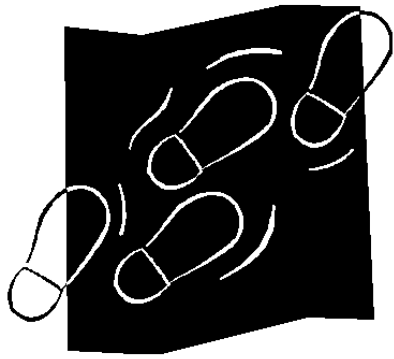
Stepping forward….

- Challenge yourself to learn to create flexible, digital materials.
- Attend in-school and out-of-school training on the tools available at your school.
- Use the Internet to locate curriculum specific digital materials.
- Build an a personal and school inventory of digital materials.
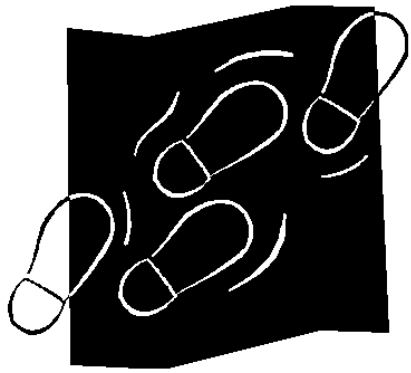
Stepping forward….

- Increase awareness of UDL principles at your school.
- Make a commitment as a school to make curriculum materials more flexible.
- Foster school team collaboration to share the work to move toward a more universally designed curriculum.
- Look for ways to increase classroom computers at your school.

What school administrators can do….

- Make UDL part of the school improvement plan.
- Support the development of a UDL leadership team
- Conduct "UDL walks" to look for good uses of instructional technology.
- Recognize staff for applications of UDL by email, at staff meetings.
- Direct staff members to develop Individualized UDL Plans.
- Encourage the use of teacher ePortfolios.
- Encourage peer coaching
- Support before and after school training, 10 minute tech tips at staff meetings, and annual technology showcases.
- Identify ways to increase computers in classrooms.

Professional development should be "on-site, intensive, collaborative, and job embedded…"

Wagner et al (2006).
Change leadership: A practical guide to transforming our schools.

What a UDL leadership team can do….

- Survey staff needs
- Identify short and long term UDL objectives
- Offer training geared to identified needs in various formats:
  - Tech Tuesdays
  - 20 minute skill builders
  - Hands-on trainings to create instructional materials
- Display and share teacher made materials

Need multiple teacher training methods and supports

Single day, one-size fits all model assumes that the audience of teachers have similar teaching and learning styles
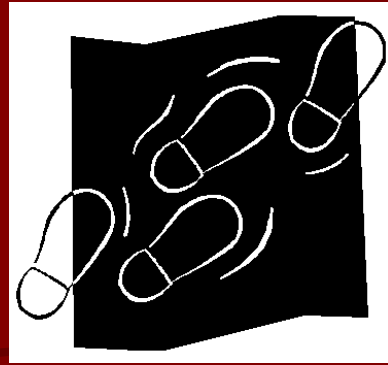
– At schools, you need just-in-time instruction and ongoing support

– Teachers need time to exchange ideas and reflect together.

Categories of technology adopters: Which will you be?
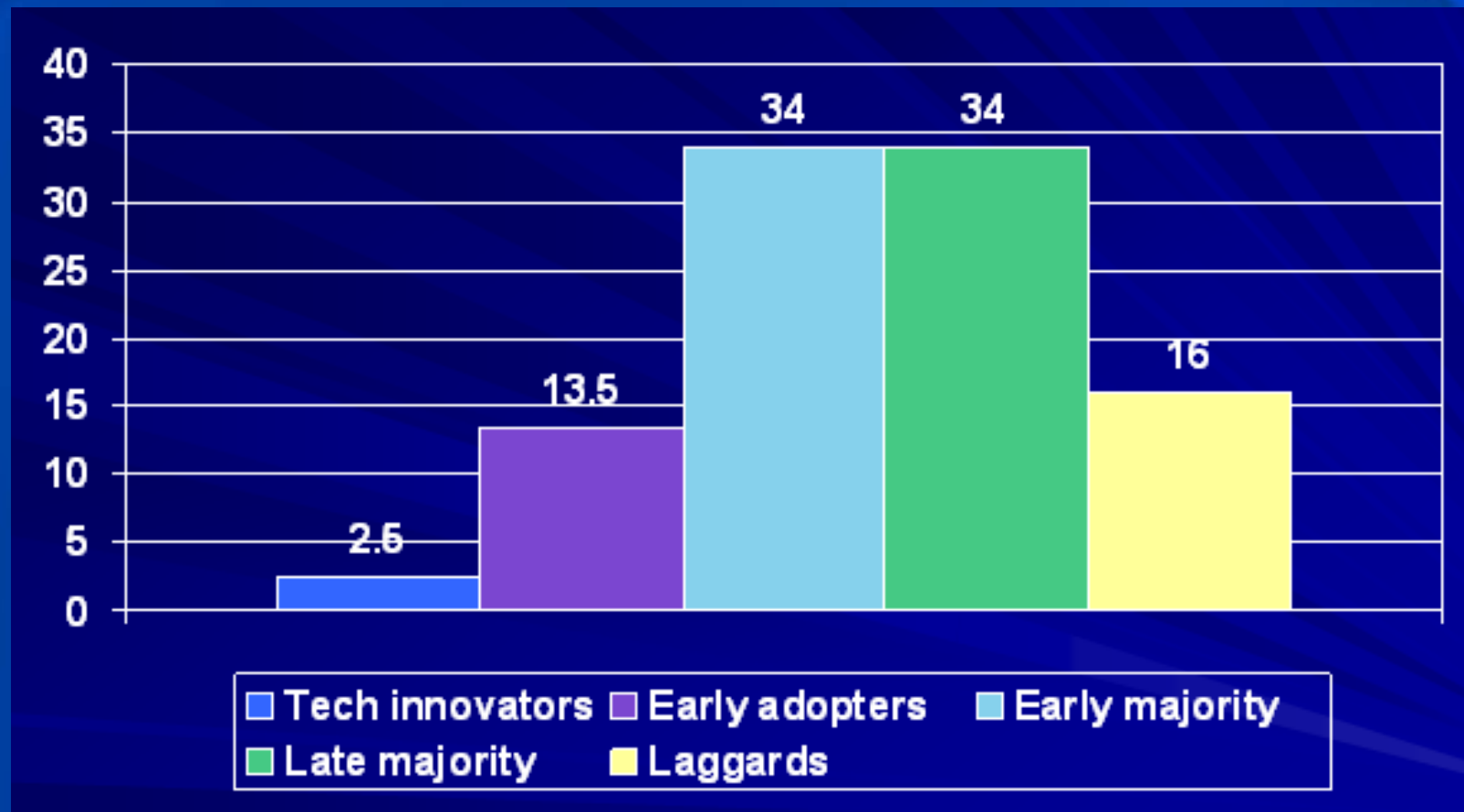
Rogers, E. (2003). Diffusion of innovations (5th ed.) NY: Free Press

Professional Development to promote UDL

First Steps

Professional development is the "biggest technology challenge" facing schools nationally.

Lawless, K. A. and Pelligrino, J. W. (2007). Professional development in integrating technology into teaching and learning: Knowns, unknowns, and ways to pursue better questions and answers. Review of Educational Research, 77, 575-614.

- Only 37% of teachers report using computers instructionally with students daily
- 90% of teachers report participating in fewer than 2.5 days of PD on technology per year.
- Research shows 30 hours of focused PD is needed to change professional practices.

Harris, J. (Feb. 2008). One Size doesn't fit all: Customizing educational technology professional development. Learning and Leading with Technology. p. 18-23.

Approaches to Training: Think Broadly

- You will need a variety of training approaches
  - ✓ After school training
  - ✓ Stipend training
  - ✓ 1 to 3 credit courses
  - ✓ On-line training
  - ✓ Website resource development
  - ✓ Summer training
  - ✓ Independent study
  - ✓ Job-embedded training

Some thoughts about staff training

- Don't teach software; teach strategies in the context of general ed. curriculum themes.

- Embed UDL principles of "front-loading AT" into all training topics.

- Expose teachers to the power of the internet to obtain digital material.

- Show teachers how to use technology applications that are <u>available.</u>

Help other teachers become comfortable with technology (10 year Apple Study)

5 Stages of Concern

1. Entry: address teacher uncertainty
2. Adoption: address skills and strategies
3. Adaptation: focus on integrating content and technology seamlessly
4. Appropriation: technology as an effortless teaching tool
5. Invention: create new learning environments using technology tools

Technology implementation requires a long term commitment

Focused, sustained innovations take at least 3-5 years to implement

21st Century Teaching and Learning

UDL creates a vision for what teaching will look like in the 21st Century.

According to Oliver Wendell Holmes….

" A mind that is stretched to a new idea never returns to its original dimension."

Dare to Change!

Think Universal Design for Learning

Frontload accessible technologies into the curriculum